

Application Serial No. 09/769,672
Amendment dated July 7, 2003
Reply to Office Action dated April 10, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-20. (Cancelled)

21. (New): A process for producing a glass melt, comprising the steps of:
melting glass in a first stage;
refining the melt in a second stage, the melt having a polyvalent ion content of at least 0.5 wt. %, with at least one of said melting and refining steps conducted at a temperature of at least 1800° C; and
homogenizing and conditioning the glass in a third stage.

22. (New) The process of Claim 1, wherein at least one of said melting and refining steps is conducted at a temperature of between 2100° C and 2400° C.

23. (New) The process of Claim 1, wherein at least one of said melting and refining steps is conducted at a temperature of at least 2400° C.

24. (New) The process of Claim 1, wherein said refining step is conducted at a temperature of between 1800° C and 2400° C.

25. (New) The process of Claim 1, wherein said polyvalent ions comprise one or more ions selected from the group consisting of vanadium, cerium, zinc, tin, titanium, iron, molybdenum, europium, manganese, and nickel.

26. (New) The process of Claim 1, wherein said melt is free from toxic refining agents.

27. (New) The process of Claim 1, wherein said refining step is conducted by heating the melt in a crucible using an induction coil.

28. (New) The process of Claim 22, wherein said refining step is conducted at a temperature of between 1800° C and 2400° C.

29. (New) The process of Claim 23, wherein said refining step is conducted at a temperature of between 1800° C and 2400° C.

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30. (New) The process of Claim 22, wherein said polyvalent ions comprise one or more ions selected from the group consisting of vanadium, cerium, zinc, tin, titanium, iron, molybdenum, europium, manganese, and nickel.

31. (New) The process of Claim 23, wherein said polyvalent ions comprise one or more ions selected from the group consisting of vanadium, cerium, zinc, tin, titanium, iron, molybdenum, europium, manganese, and nickel.

32. (New) The process of Claim 24, wherein said polyvalent ions comprise one or more ions selected from the group consisting of vanadium, cerium, zinc, tin, titanium, iron, molybdenum, europium, manganese, and nickel.

33. (New) The process of Claim 26, wherein said polyvalent ions comprise one or more ions selected from the group consisting of vanadium, cerium, zinc, tin, titanium, iron, molybdenum, europium, manganese, and nickel.

34. (New) The process of Claim 22, wherein said melt is free from toxic refining agents.

35. (New) The process of Claim 23, wherein said melt is free from toxic refining agents.

36. (New) The process of Claim 24, wherein said melt is free from toxic refining agents.

37. (New) The process of Claim 25, wherein said melt is free from toxic refining agents.

38. (New) The process of Claim 22, wherein said refining step is conducted by heating the melt in a crucible using an induction coil.

39. (New) The process of Claim 23, wherein said refining step is conducted by heating the melt in a crucible using an induction coil.

40. (New) The process of Claim 24, wherein said refining step is conducted by heating the melt in a crucible using an induction coil.